NGA Today Briefing

Slide 1: Today's brief is General Clapper's standard briefing. This briefing will provide a corporate overview of the National Geospatial-Intelligence Agency. It will touch on the agency's major facets. It will not get into technical nuts and bolts about the products and services the agency provides. It will offer a good understanding of GEOINT and the vision and direction of our agency.

Slide 2: Today, we will cover a lot of ground and these are the topics we will discuss.

Slide 3: NGA is both a national intelligence agency and a combat support agency.

Our Director reports to both the Secretary of Defense and the Director of National Intelligence. Our agency receives funding from both the Department of Defense and the Intelligence Community.

NGA's mission is to produce timely, relevant, and accurate geospatial intelligence or GEOINT in support of national security objectives. For those book worms out there, the actual definition of GEOINT is, "The exploitation and analysis of imagery and geospatial information to describe, assess and visually depict physical features and geographically referenced activities on the earth." I will talk more about what GEOINT is and why it is important as we move through the brief.

Slide 4: NGA was first known as the National Imagery and Mapping Agency, or NIMA. It united several organizations, including the CIA's National Photographic Interpretation Center, or NPIC, and the Defense Department's Defense Mapping Agency. Because both organizations wished to maintain their tradecraft legacy ties, a compromise was reached to retain both imagery and mapping within the new organization's name. But, the agency quickly developed its own tradecraft — geospatial intelligence. Our leadership thought the name of the agency should reflect that reality. On Nov. 24, 2003, the President signed the 2004 Defense Authorization Bill, a provision of which authorized NIMA to formally change its name to the National Geospatial-Intelligence Agency. Our new name was the latest step in a transformation process underway since our inception to introduce the new intelligence discipline within the Intelligence Community.

Slide 5: NGA is headquartered in Bethesda, Maryland, but has other facilities in the East and West. There are concerns for management regarding workforce protection and there is also a logistics problem with having all our of our facilities and resources located throughout the country.

Our infrastructure will likely undergo many new changes in the future because the Base Realignment and Closure Commission (BRAC) recommended that we consolidate our East facilities onto one campus in Ft. Belvoir.

Currently, in the event of an emergency or disaster here at headquarters, command transfers immediately to St. Louis and our Western executive assumes control until the D/NGA or DD/NGA can set up command and control at another NGA facility in the DC area.

Slide 6: So what is GEOINT and why it is important?

Slide 7: GEOINT unites the complementary fields of imagery intelligence, mapping, charting, and geodesy into a single, integrated intelligence discipline.

As this chart shows, we are using GEOINT to support what we call Intelligence Preparation of the Environment (IPE). IPE is based on IPB or Intelligence Preparation of the Battlespace or Battlefield. We layer data about the earth, whether in a maritime or terrestrial context, to provide our nation’s decision-makers and warfighers with the information they need to prepare for and respond to national security challenges.

It is our belief that the reliable integration of these multiple layers, built to meet specific themes or perspectives of need, found in a variety of formats, allows us to deliver an infinitely useable and calibrated foundation upon which other disciplines of information can be laid. All this collaborative information then enables the policy and decision-makers and the planners and the operators to work consistently and with minimized risk.

We try to answer the questions on the right side of the chart at either a global, regional, or local context. By doing so, we prepare our customers (national decision-makers, warfighters, etc) with the answers they need to plan and execute important missions.

The red banner on the other side that reads “standards” acknowledges that NGA is leading the way to standardize the sharing of geospatial information. As the functional manager for GEOINT, NGA recently created the GEOINT Standards Technical Working Group, or GWG.

Slide 8: GEOINT allows us to create integrated information and intelligence by fusing multiple sources of information to support planning, decision-making, and action and it allows us to quickly see actionable intelligence.

But, it also has limitations, many of which are listed here.

Slide 9: Let’s look at the impact of GEOINT. WWII tactics of hitting a target were essentially to carpet bomb an area with 10s to 100s of bombs in hopes that the target would be hit. Throughout time our accuracy improved, allowing us to use fewer bombs to hit targets.

Precision bombing cuts down on civilian casualties, minimizes collateral damage to useful structures, such as runways and buildings.

Precision bombing is done through a service that we provide -- point mensuration. Through point mensuration NGA provides precise geodetic WGS-84 datum coordinates and elevation data to the intelligence and military community in their requirement for conventional targeting purposes. This data is required for intelligence products (Operational Support Packages, Basic Target Graphics, etc.), modern weapons systems, and new weapon development and testing.

Slide 10: We no longer operate in the war environment that we saw during the Cuban missile crisis and cold war era where we could have U2s fly over and gather the surveillance of static targets and then go back in a couple of days and see that they were still generally located in the same place.

Now armies, divisions, and individuals move quickly above and below the earth’s surface. We are forced to follow these more transient adversaries, processing the imagery we collect in a couple of hour’s timeframe. We don’t have the luxury of relying on static targets. Real time targeting and persistent surveillance are strategies we currently employ to gather/gain information on individuals and mobile targets.

Denial and deception is also another challenge we face. Our adversaries hide their equipment, bury their dirty work, and carry out missions underground.

To succeed, we must adapt to this unconventional warfare. We must locate the tunnel entrances, utilize change detection resources, and use persistent surveillance.

Slide 11: When NIMA stood up in 1996, it inherited a pretty sick infrastructure. The antecedent infrastructures – the communications and computer capabilities – were not compatible. We have spent a lot of time, energy and money rectifying that infrastructure so that we can cope with the volumes of data that we use to create geospatial intelligence products and services. The process of building a robust infrastructure and robust Tasking, Processing, Exploitation, and Dissemination capability is called, “Convergence.”

Why is converging our architecture so important now? We are currently confronted by a substantial deluge of data that comes to us from many sources such as government and commercial satellites and airborne and other sources of data. This deluge will continue to exponentially increase. We must have a very robust modernized infrastructure and architecture to accommodate and ingest that material as well as convey it for users.

Technology is such today that we can converge the separate ground structures used to ingest the material collected from a satellite or airborne system into one robust system, making it easier for our analysts to use, ingest, look at, and analyze the data. Convergence will also make it easier for users to extract the data they need from our databases.

Slide 12: How NGA operates will operate in the future given the unconventional and changing challenges that face the agency is what transformation is all about.

Slide 13: How is NGA transforming?

We have moved from traditional mapping and pictures to GEOINT. We are transforming and combining the mapping and imagery disciplines to produce rich geospatial intelligence. Where maps are 2 dimensional, GEOINT can be used to create fly-through visualizations to help warfighters understand where they are going before the mission starts.

We have moved from a reliance on National Technical Means and EO imagery to a usage of more and more commercial imagery to help lighten the load on national technical means. We are also increasingly using airborne surveillance and imagery and all forms of the electromagnetic spectrum from multi to hyper spectral imagery products to create quality GEOINT products.

We have moved from a working environment that is heavily dependent on government employees to one in which there are many contractors working throughout our agency. We are rapidly integrating contractors as part of the NGA team. We must work with industry to create an ongoing dialogue on new GEOINT technologies, techniques, and practices.

We are pushing for a robust for a very robust TPED architecture. To achieve this, we will converge our systems to provide a more inclusive, persistent, responsive, accessible, and tailored architecture to maximize our GEOINT capabilities.

Slide 14: The intelligence community is currently in a time of transition and transformation. NGA is on the forefront of the transformation within the Intelligence Community. NGA is developing new GEOINT products and services and forming key partnerships with other intelligence agencies.

NGA is moving towards an environment of collaborative, predictive, and actionable intelligence. We will provide a self-service environment for GEOINT customer, analysis that is insightful, actionable, and deep, and tailored on-time solutions.

Slide 15: Transformation at its heart is about harnessing technology. We will continue to move away from 2D mapping and text to provide the GEOINT our customers need.

This photo is what we are trying to get away from.

During Operation Iraqi Freedom, NGA delivered 325 hard drives to 50 remote locations in theatre to provide current, uniform digital map products and imagery to multiple commanders and provide them all with a common operating picture, COP.

Having our personnel forward deployed and having commanders with our hard drives allowed units to create customized map products. They didn’t have to tape maps together or have an objective at the corners of several hardcopy maps.

Slide 16: Several major points are important for you to take away from this brief.

Slide 17: -- All of NGA's Core Competencies Comprise GEOINT
-- GEOINT Provides the Foundational "Knowledge Map"
-- NGA is both a Combat Support Agency and a National Intelligence Agency
-- We Are Transforming
-- People are Our #1 Treasure